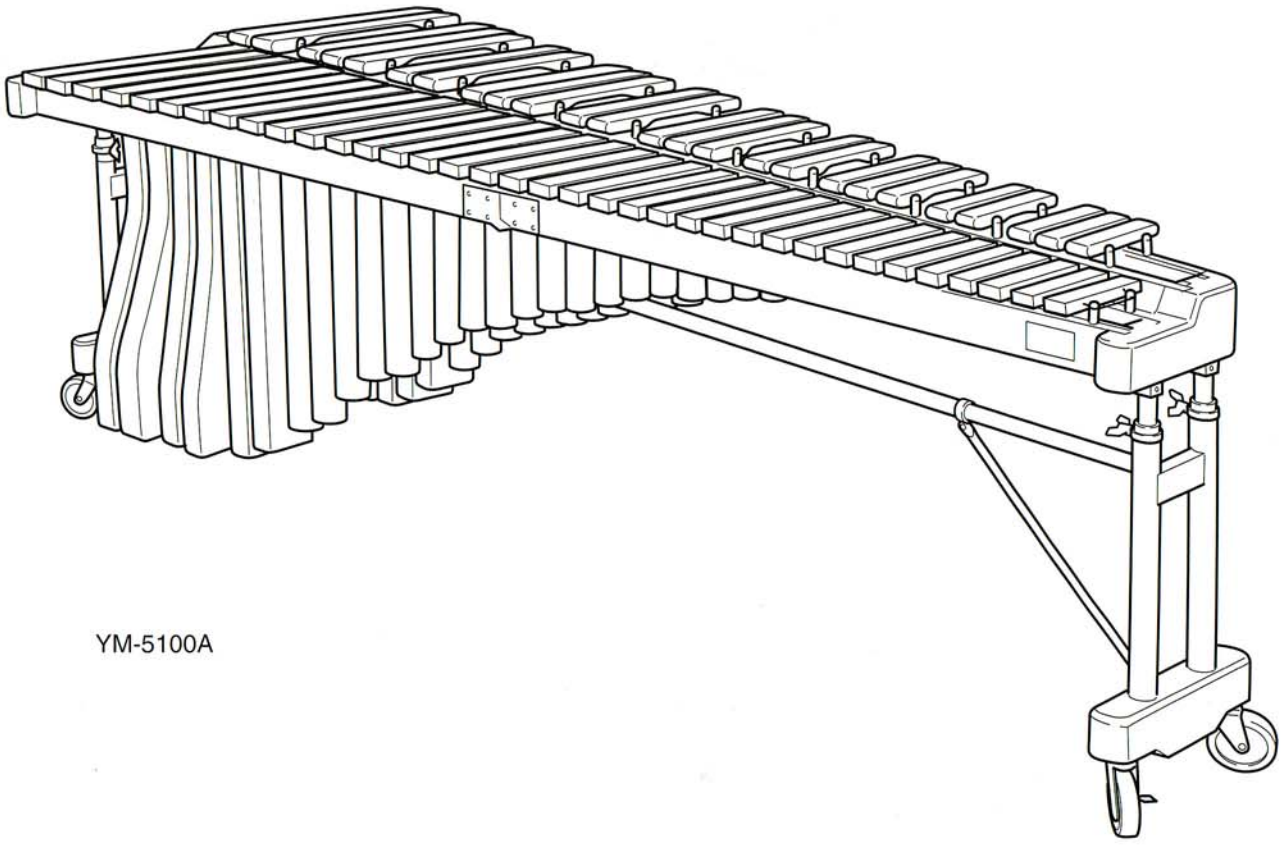
YAMAHA

CONCERT MARIMBAS

YM-5100A/4900A/4600A

OWNER'S MANUAL



YM-5100A

Be sure to read "PRECAUTIONS FOR HANDLING GAS SPRING" and "PRECAUTIONS" on page 2.

PRECAUTIONS FOR HANDLING GAS SPRING

Please observe the following instructions for proper handling of the gas spring.

1. Precautions for handling the gas spring ⚠ CAUTION

⃠ This gas spring requires no oil supply to its sliding section. Additional oil will reduce the sealing durability and cause the oil to leak.
⃠ Never apply any impact to the gas spring. It will cause oil leakage, malfunction or breakage.
⃠ Never disassemble the gas spring. As a high pressure gas is sealed in it, disassembling it will cause a high risk.
⃠ Note that there is not much rigidity in the bending direction. Depending on accuracy in its installation, the bending load will cause the rod to bend, resulting in malfunction.
⃠ Note that a nick on the piston rod or cylinder will shorten the service life of the sealing or cause a malfunction.
⃠ Do not expose the gas spring to an excessively high or low temperature. The allowable temperature range for use is -20°C to 80°C.
⃠ Avoid using the instrument where it is exposed to rain, water or much dust.
⃠ Do not apply an excessive force to lift the frame end and pull off the gas spring from the leg.

- Do not apply a high tensile load to the gas spring as it will cause damage to the gas spring.
- In the event of a failure, stop using the instrument and contact the shop of its purchase. If your dealer is unable to assist you, please contact Yamaha directly.

2. Instructions for discarding the gas spring ⚠ DANGER

Make sure to observe the following instructions when discarding the gas spring.
As pressurized nitrogen gas is sealed in the gas spring, be sure to release before discarding it. Or an explosion may occur, causing injury.

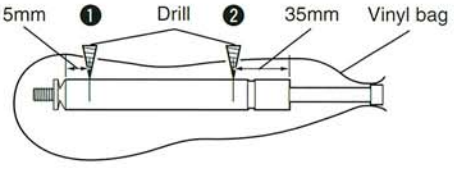
[PRECAUTIONS]

A. Do not crush.
B. Do not cut.
C. Do not make a hole anywhere other than the specified positions (❶ and ❷ in the Fig.1).
D. Do not throw it in a fire.

[Discarding procedure]

1. Put the gas spring in a vinyl bag. Using a drill of 2 to 3 mm, make a hole ❶ from outside of the vinyl bag at the position as specified in the figure to release the gas and oil and then make a hole ❷ at the position as specified. **(Be sure to make holes in the order of ❶ and ❷.)**
2. If a vinyl bag is not used, the oil and drill chips will spread. (In such a case, wear eye protection glasses.)

Fig. 1



*** Drill 2 holes as shown above to release the gas before discarding the gas spring.**

PRECAUTIONS

Please read the following instructions carefully before using your marimba.

◆ Installation Location

Use or storage in the following locations may cause damage, even when packaged.

- In direct sunlight, such as near a window, or in a closed vehicle in daytime.
- Near heating devices or in other locations subject to excessive heat.
- In excessively cold environment.
- In places with excessive humidity or dust.
- Locations subject to vibrations.

◆ Handling

- Never place an object on or lean against the instrument, as this may cause damage to the tone bars and frame parts or topple the instrument, which is extremely dangerous.
- Do not use hard orchestra bell mallets or other hard objects on your marimbas. The resulting dents or scratches on the tone bars could impair the sound.

◆ Moving and Transporting the Instrument

- Before moving the instrument, make sure that the caster brakes are released. Also make sure to lift the instrument slightly when moving over rough surfaces.
- When the instrument must be transported to a different location, disassemble it to the same state as when it was purchased (See page 4.), taking care to pack each component properly. Disassembly steps are in the opposite order of assembly.

◆ When in Use

- Always engage the caster brakes.

◆ Maintenance

- The tone bars should be polished from time to time using a soft and dry cloth or silicone cloth. Stains that cannot be removed with a dry cloth may be wiped off using a small amount of ethyl alcohol. Never use thinner or benzene or a wet cloth for cleaning purposes.

◆ Keep This Manual for Future Reference

- After reading, make sure to keep the manual in a safe place.

⚠ Assembly Cautions

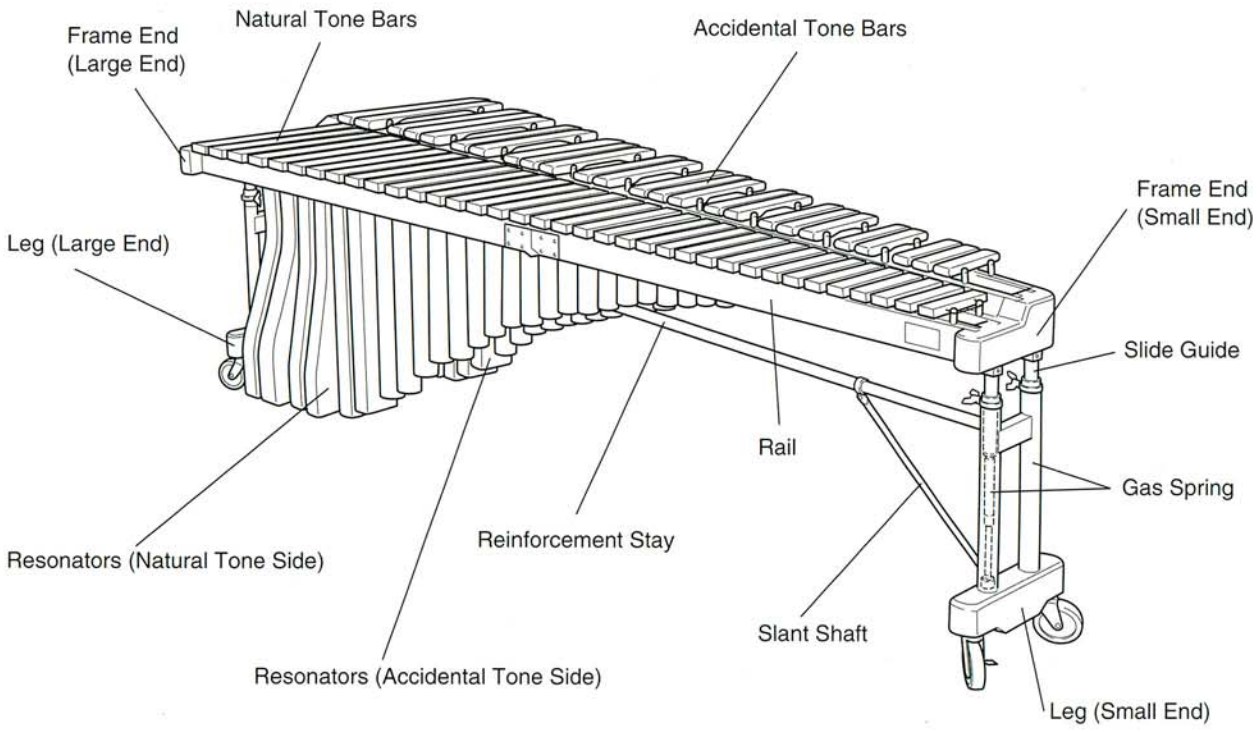
- When assembling/disassembling the instrument, make sure to follow the procedure outlined in this manual. Assembly in the wrong order can cause the pipes to drop which may result in injury, impair the performance functionality of the instrument or cause noise.
- After final adjustment of the legs the fixing screws must be tightened securely to prevent loosening. Looseness may cause the instrument to shift during performance and can also cause noise and other problems. Retighten the screws from time to time.

Thank you for purchasing a Yamaha Concert Marimba.
We have worked hard to make these the finest marimbas ever produced, and are confident you will be satisfied with your choice. Please read the following information carefully in order to take the best possible care of your new instrument, and to ensure a long life of trouble-free musical enjoyment.

NOMENCLATURE

- YM-5100A/4900A/4600A

  * The illustration shows model YM-5100A.



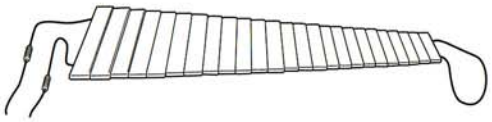
CONFIRMATION OF PACKING CONTENTS

The shipping carton of your marimba should contain the parts shown below. Before assembling the instrument, confirm that all parts are included as listed.

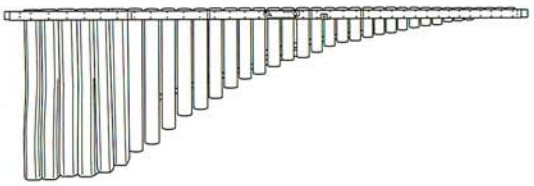
*** In the event that a part is missing, please contact the shop where the instrument was purchased.**

① Natural Tone Bars

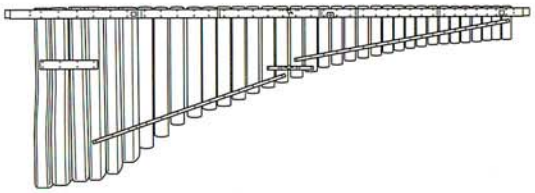
② Accidental Tone Bars



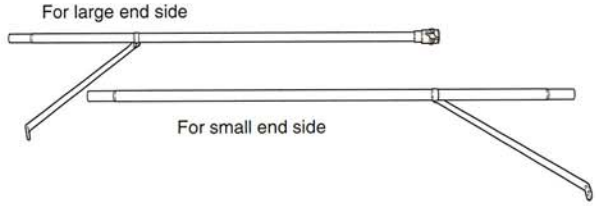
③ Resonators (Natural Tone Side)
Resonance Regulator: G_{23}, A_{25}
(YM-5100A, YM4900A only)



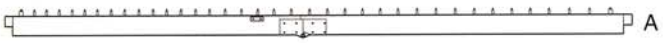
④ Resonators (Accidental Tone Side)
Resonance Regulator: $F\sharp_{22}$, $G\sharp_{24}$, $A\sharp_{26}$
(YM-5100A, YM4900A only)



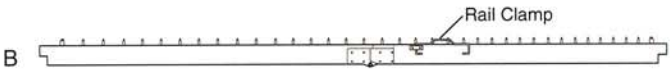
⑤ Reinforcement stays



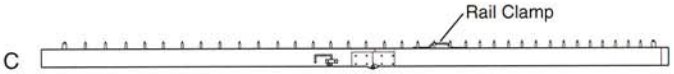
⑥ Rail (1)
Marking on the end face (A).



⑦ Rail (2)
Marking on the end face (B).

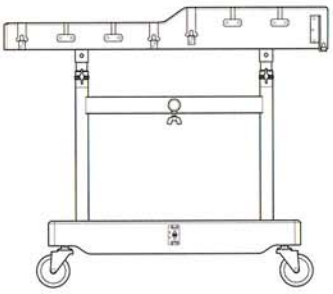


⑧ Rail (3)
Marking on the end face (C).

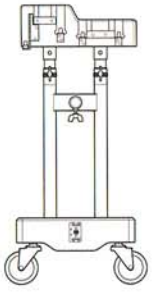


⑨ Rail (4)
Marking on the end face (D).

⑩ Leg (Large end)



⑪ Leg (Small end)



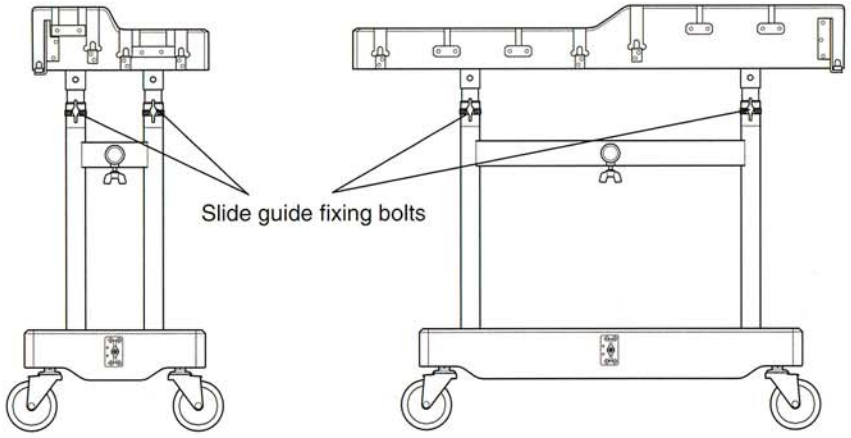
ASSEMBLY

For safety, assembly should be performed in a location with sufficient space. We recommend you assemble the instrument on a soft rug or carpet.

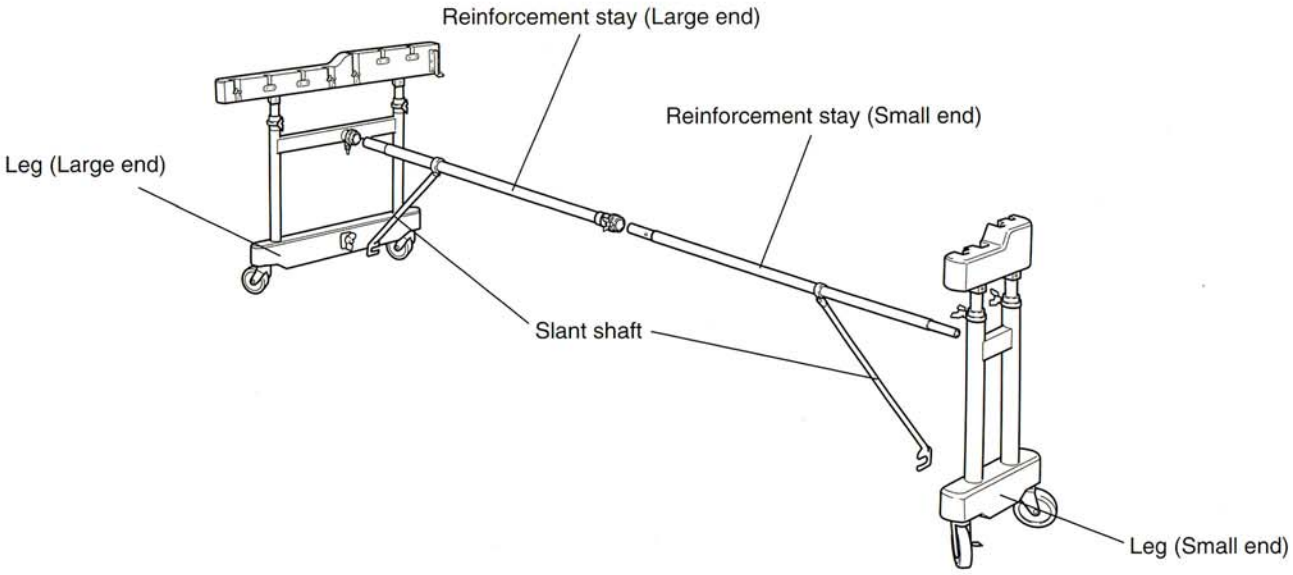
1 Connect the large and the small end legs using the reinforcement stays.

** Before proceeding to the next step, make sure that the slide guide fixing bolts of the large and small end legs are securely fastened.*

⚠ CAUTION
Do not loosen the slide guide fixing bolts in this stage. Loosening them will cause a sudden rise of the frame end which is very dangerous.

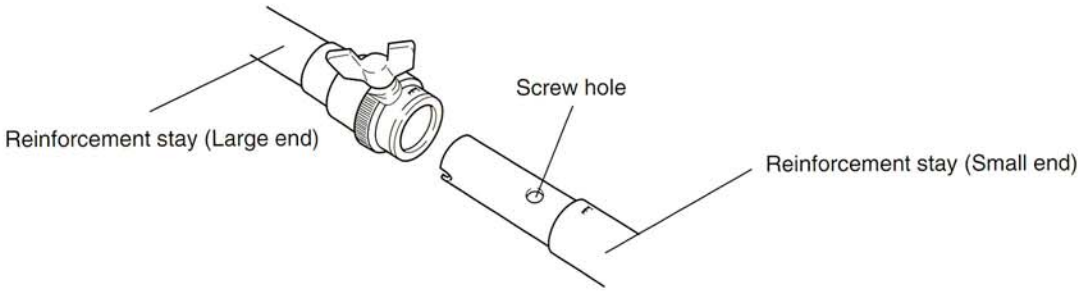


1-1. Place the large and small end legs and reinforcement stays so that they will be positioned as illustrated below after assembly.

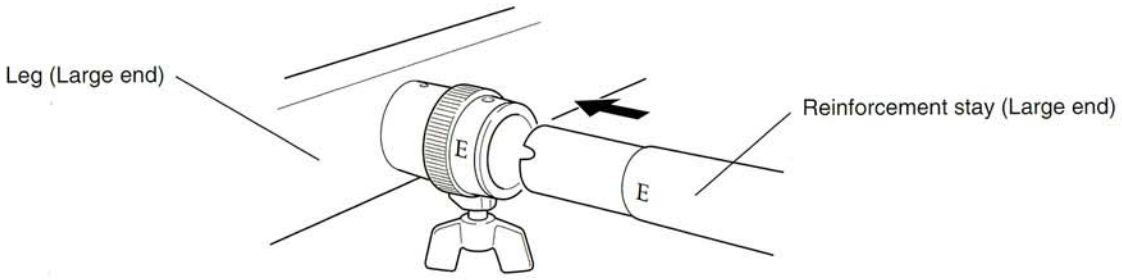


ASSEMBLY

1-2. Connect the reinforcement stays at the center. Align the end of the fixing bolt and the holes in the reinforcement stays and tighten the fixing bolt securely.

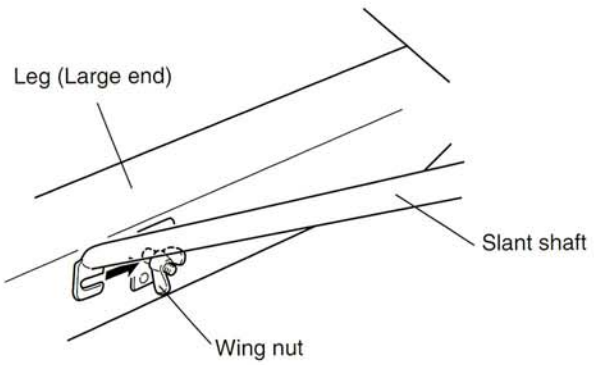


1-3. Install the reinforcement stay in the large end leg.
Insert the "**E**" marked end of the reinforcement stay (with its slant shaft facing down) into the joint (marked with "E") on the large end leg until it stops and tighten the fixing bolt securely.
In the same way, install the reinforcement stay in the small end leg. (There is no marking on the small end joint.)



1-4. After making sure that both legs are perpendicular to the floor, fit the end of each slant shaft to the wing nut located in the lower part of each leg and tighten it securely.

* **Make sure that the slant shaft is securely fitted.**

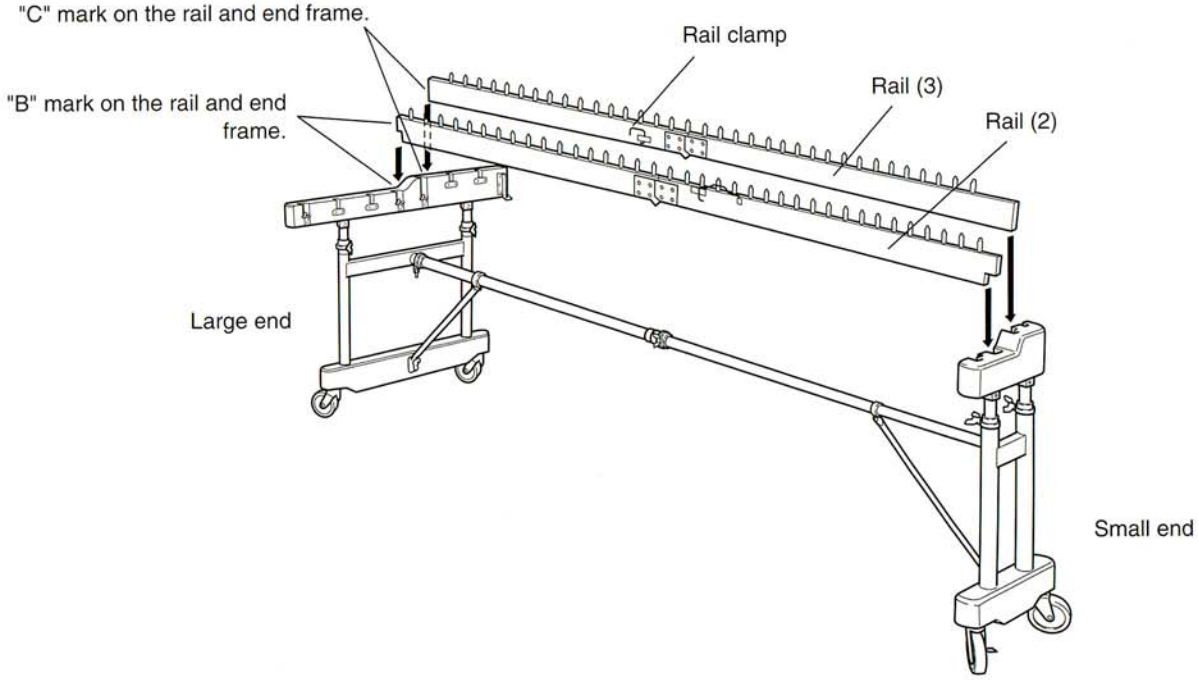


2 Insert rails (2) and (3) into the end frames of the legs.

2-1. First, insert the rail (2).
A mark "**B**" is printed on the big end face of the rail (2) and the groove section of the end frame of the big end leg.

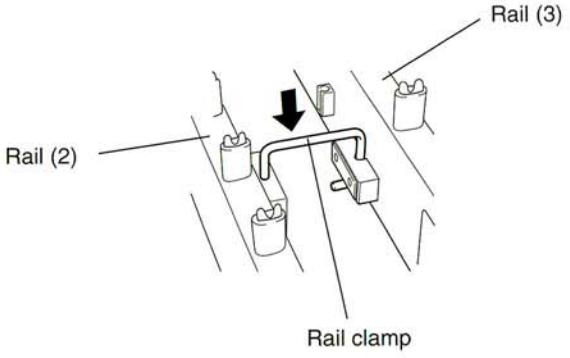
* *Do not insert one side of the rail all the way down first, but push both sides into grooves alternately little by little until both sides are inserted fully and stop.*

Next, in the same way, insert the rail (3) securely.
A mark "**C**" is printed on the big end face of the rail (3) and the groove section of the end frame of the big end leg.



2-2. Engage the short rail clamp located at the center of the rail (3) with the rail (2).

* **Release the clamp from its holder, lift and move it to the rail (2) and push it down fully.**



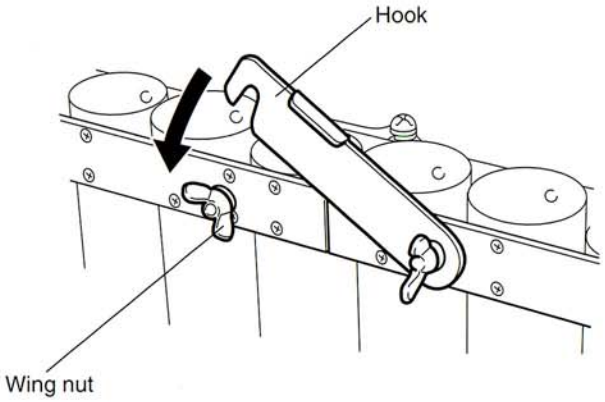
ASSEMBLY

3 Attach the resonators.

3-1. Unfold the resonators, apply the hook and tighten the wing nut securely.

** All the natural tone resonators are closed at the bottom.*

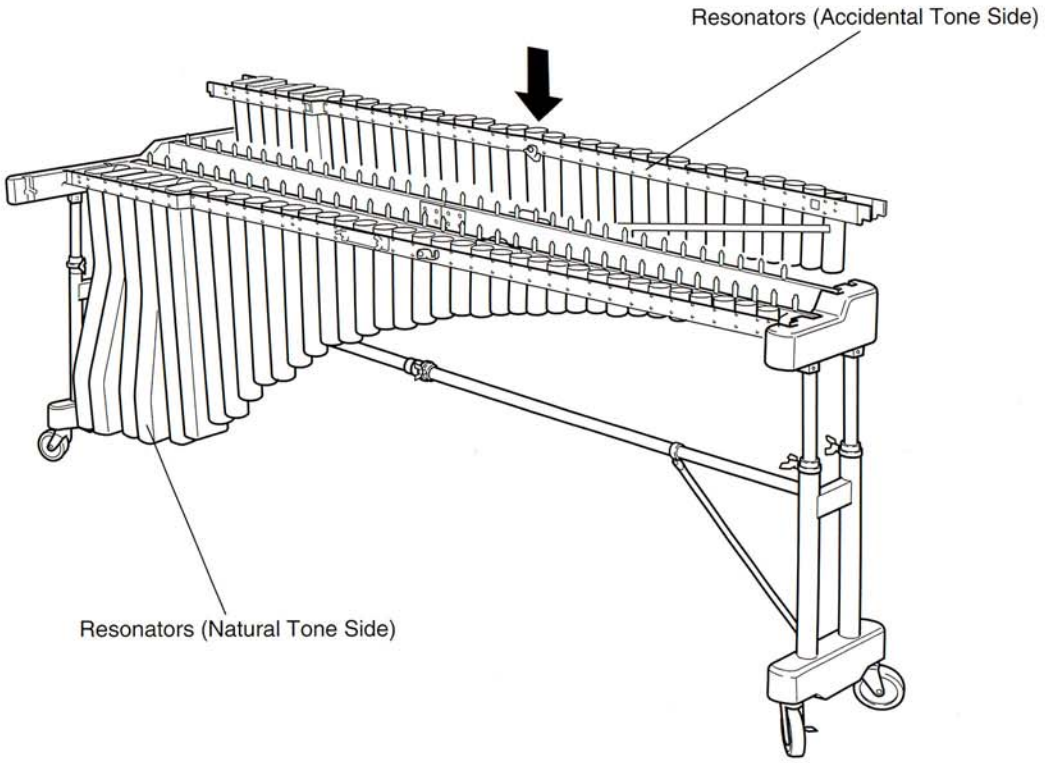
*** When assembling the resonators, use care not to damage them.**



3-2. Insert the resonators into the resonator holders on the end frames in the same way as the rails.

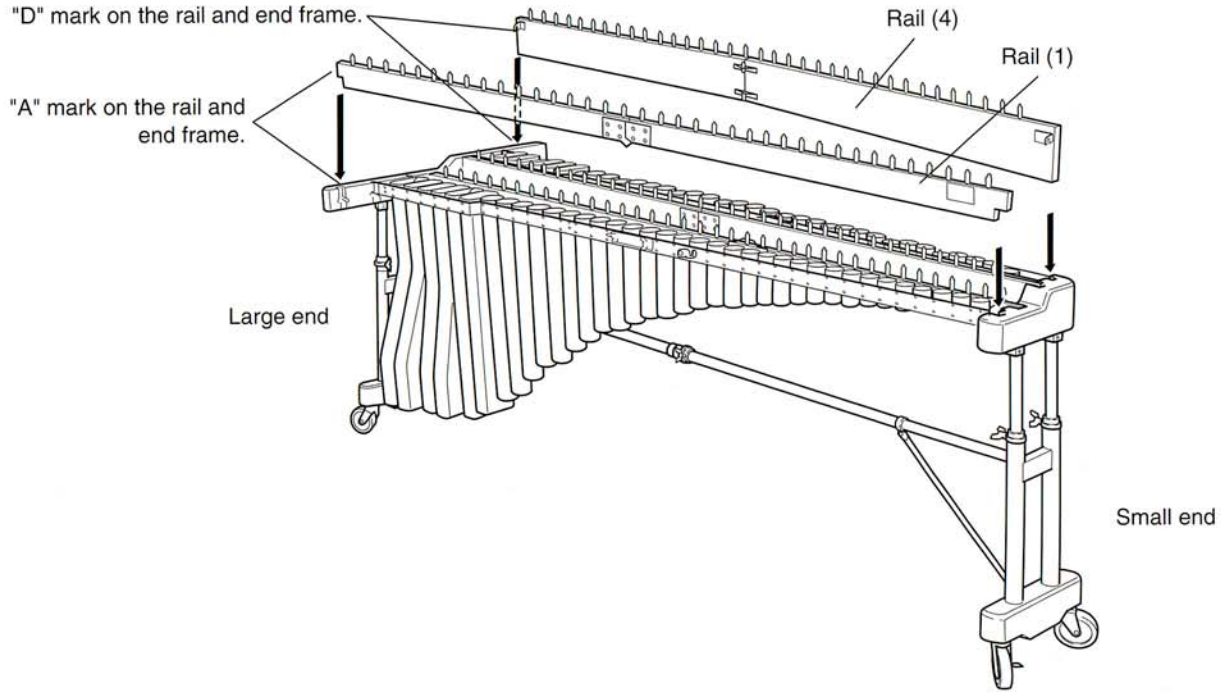
** Make sure not to confuse the natural tone resonators and accidental tone resonators.*

** Take care not to bump the resonators against the legs, etc.*



4 Insert the rails (1) and (4) into the end frames of the legs.

4-1. Insert the outer rails (1) and (4) in the same way as the inner rails (2) and (3).
A mark "**A**" is printed on the big end face of the rail (1) and the groove section of the end frame of the big end leg, and a mark "**D**" for the rail (4).



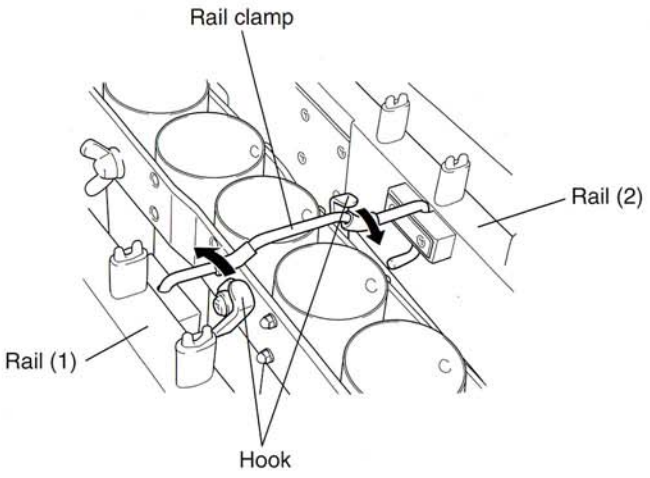
4-2. Engage the rail clamps on rail (2) and rail (3) with rail (1) and rail (4) respectively.

YM-5100A Only

4-3. Secure the resonators by fitting their hooks to the rail clamps engaged in Step 4-2.

** Hooks are provided at 2 locations both on the natural tone side and the accidental tone side.*

*** Make sure that each hook is securely fitted.**

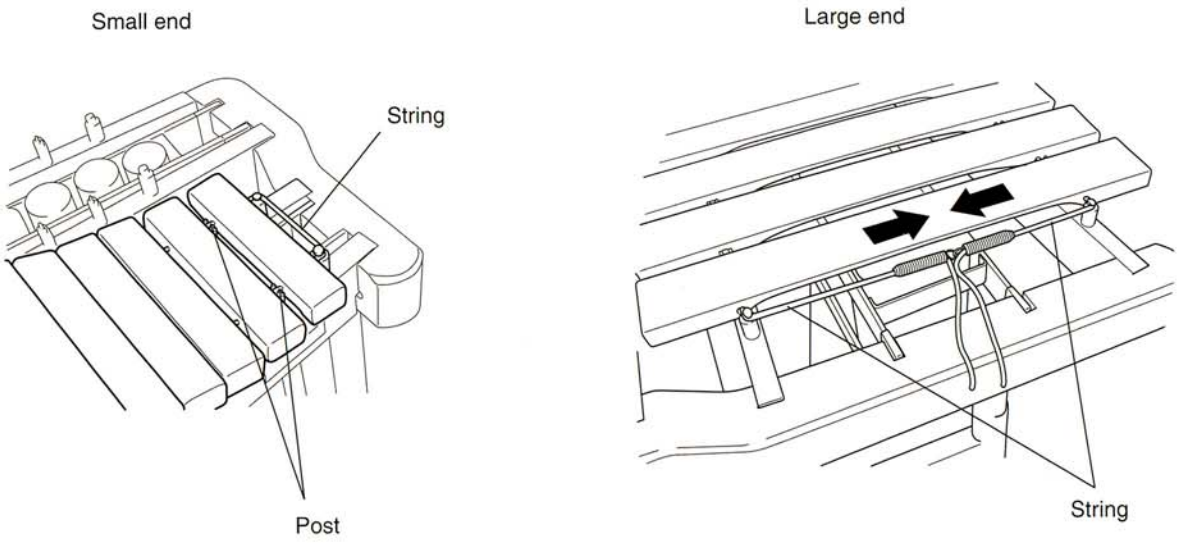


ASSEMBLY

5 Set the tone bars.

5-1. Set the natural tone bars first.
Holding the strings of the tone bars firmly with both hands, place the tone bars on the rails gently. Align each tone bar individually and hook its string onto the corresponding post. After confirming that the string is secured to every post, fix the tone bars by pulling the right and left strings forward from the large end side and hooking the two springs to each other.

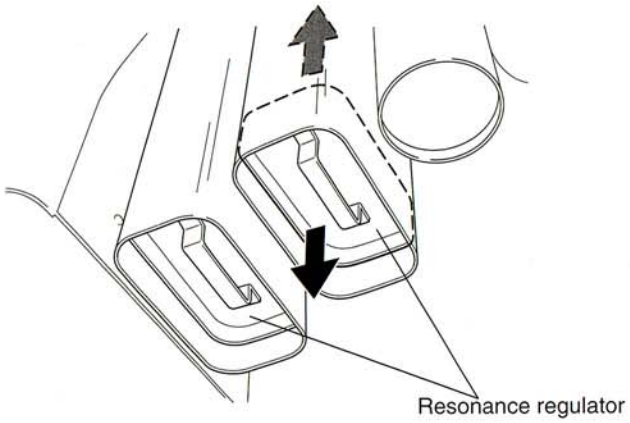
* *When setting the tone bars, use care not to cause any damage to them.*



YM-5100A/4900A Only

5-2. Each of F♯22, G23, G♯24, A25 and A♯26 resonators has a resonance regulator. While tapping each tone bar, move the resonance regulator to find the position where the best resonance is obtained.

* **When adjusting the resonance regulator, check to ensure that it is not aslant.**

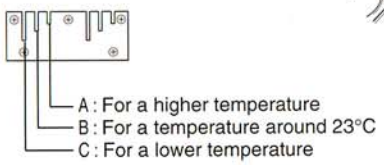


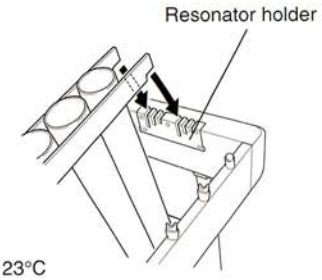
YM-4600A Only

5-2. As YM-4600A does not have a resonance regulator, insert resonators into resonator holders as shown below.

* The resonators are factory adjusted so that the optimum resonance level is obtained at 23°C. If desirable resonance is not available due to the temperature lower or higher than 23°C, adjust setting of the resonators. Move the resonators to fit into shorter grooves when the temperature is higher and into longer grooves when the temperature is lower.

Temperature	Grooves to use
Higher	Short groove ("A" in the figure right)
Around 23°C	Center groove ("B")
Lower	Long groove ("C")

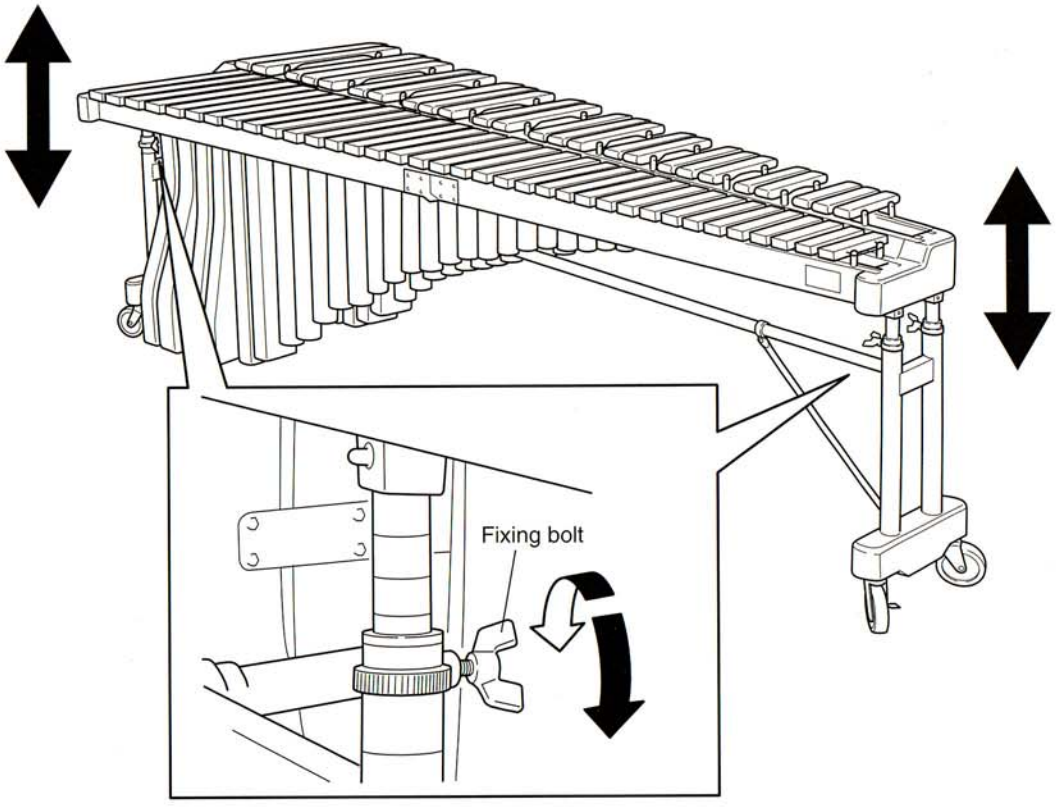




6 Adjust the height of the tone bars.

While supporting the frame end of the leg by hand, loosen the fixing bolt of both slide guides on the large end and small end sides.
Adjust the height to the desired level and tighten the fixing bolts securely.
When adjusting the height, use the lines on the slide guide for reference to keep the tone bars in parallel with the floor surface.

Upon completion of assembly, check to make sure that each bolt is tightened securely.



SPECIFICATIONS/SCALE RANGE

YM-5100A

- **Range**
  C16~C76 (5 octaves)
- **Bars**
  Honduran Rosewood
- **Bar sizes**
  72~41mm (2.8"~1.6") wide
  24~20mm (0.94"~0.79") thick
- **Resonators**
  Helmholtz, Elliptic low sound resonators
- **Height Adjustment**
  Gas spring system
  15cm (86~101cm)
  5.9" (33.9"~39.8")
- **Dimensions (WxD)**
  261x103cm (102.8"x40.6")
- **Weight**
  96kg (211lbs 10oz)

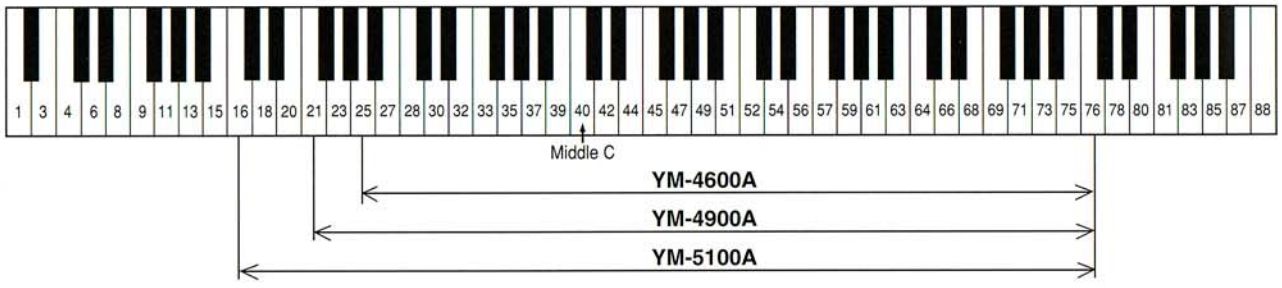
YM-4900A

- **Range**
  F21~C76 (4-1/2 octaves)
- **Bars**
  Honduran Rosewood
- **Bar sizes**
  65~41mm (2.5"~1.6") wide
  24~20mm (0.94"~0.79") thick
- **Resonators**
  Helmholtz, Elliptic low sound resonators
- **Height Adjustment**
  Gas spring system
  15cm (86~101cm)
  5.9" (33.9"~39.8")
- **Dimensions (WxD)**
  235x96cm (92.5"x37.8")
- **Weight**
  78kg (171lbs 15oz)

YM-4600A

- **Range**
  A25~C76 (4-1/3 octaves)
- **Bars**
  Honduran Rosewood
- **Bar sizes**
  65~41mm (2.5"~1.6") wide
  24~20mm (0.94"~0.79") thick
- **Resonators**
  Round resonators
- **Height Adjustment**
  Gas spring system
  15cm (86~101cm)
  5.9" (33.9"~39.8")
- **Dimensions (WxD)**
  219x91cm (86.2x35.8)
- **Weight**
  68kg (149lbs 14oz)

● SCALE RANGE



*Specifications subject to change without notice.

V449430 R2 Printed in Japan

YAMAHA